Case Report
JCAM

Mr findings of retropharyngeal lipoma causing obstructive sleep apnea syndrome

A rare cause of obstructive sleep apnea: retropharyngeal lipoma

Zülfü Birkan, Erhan Kaymaz
Radyoloji, Silivri Devlet Hastanesi, İstanbul, Türkiye.

Abstract

Lipomas are the most common benign mesenchymal tumors of the body. Compared to other locations, lipomas localized in the head-neck region are much more rare, with those located within the retropharyngeal and parapharyngeal spaces are among the rarest forms. Surgical treatment of lipomas is mainly due to cosmetic reasons. Moreover, since a lipoma might cause serious health problems due to its pressure causing effect by mass as well as its localization, these would also require surgical intervention. With this case presentation, we have aimed to report a 22- year old case with symptoms of obstructive sleep apnea, diagnosed as retropharyngeal lipoma following MRI of the cervical region, along with data from a relevant literature.

Keywords

Lipoma; MRI; CT

DOI: 10.4328/JCAM.5793 Received: 27.02.2018 Accepted: 13.05.2018 Publihed Online: 14.05.2018 Printed: 01.01.2019 J Clin Anal Med 2019;10(1): 125-7
Corresponding Author: Zülfü Birkan, Radyoloji, Silivri Devlet Hastanesi, İstanbul, Türkiye.
E-Mail: Dr.zulfubirkan@yahoo.com.tr
ORCID ID: 0000-0001-6404-5265

Introduction

Lipomas are the most common mesenchymal tumours of the body, with only 15%, located in the head- neck region [1]. Of lipomas located within the head-neck region, most common localization has been reported as a posterior cervical triangle, while those located in the retropharyngeal region are among the rarest [2]. With this report, we have aimed to present the clinical an diagnostic course of a 22- year old male patient, presenting with gradually increasing difficulty of swallowing over time , along with symptoms of obstructive apnea syndrome, who was diagnosed with retropharyngeal lipoma via MRI scans, along with data from the relevant literature.

Case Report

Twenty- two- year-old male patient applied to our otolaryngology clinic, due to his increasing symptoms of difficulty in swallowing, snoring during sleep, fatigue that lasted throughout the day along with drowsiness and episodes of daytime sleep for the past two years. During physical examination, mass lesion causing an asymmetrical narrowing of the nasopharyngeal air column was identified. The patient was scheduled for polysomnography with a preliminary diagnosis of obstructive sleep apnea and was simultaneously refered to our radiodiagnostics department, upon the identification of nasopharyngeal mass lesion. With his body mass index calculated as 25, the patient had an apnea- hypopnea index value of 20, measured during the polysomnography procedure, consistent with moderate obstructive sleep apnea syndrome. Upon evaluation of the patient's MRI scan of the cervical region, a solid lesion located within the left retropharyngeal space, that was regularly bordered and with homogenous interior structure appearance; with a magnitude measured approximately to be 56 x 19 x 17 mm, consistent with lipoma formation, characterized by its hyperintense signalling feature of T1A, T2A weighted, FLAIR imaging was identified (Figures 1,2,3,4).

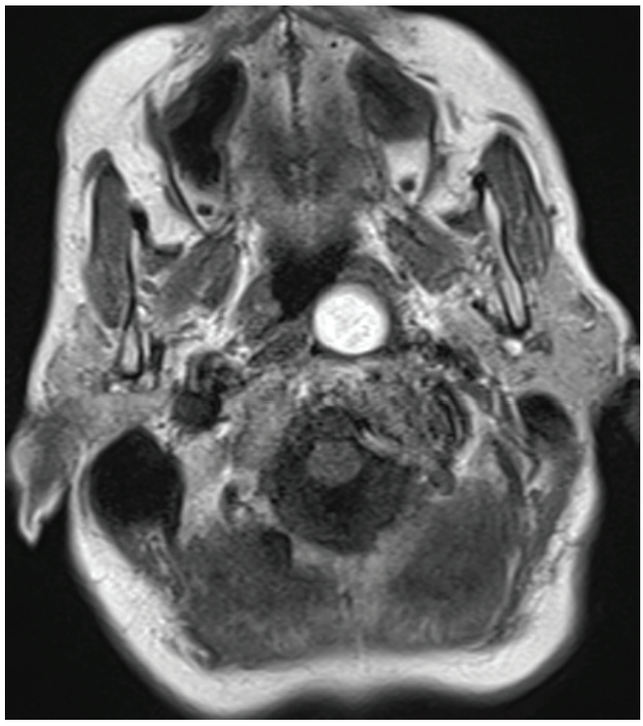

Figure 1. With an axial T1 weighted sequence, a regularly bordered hyperintense lesion within the left retropharyngeal area is identified.

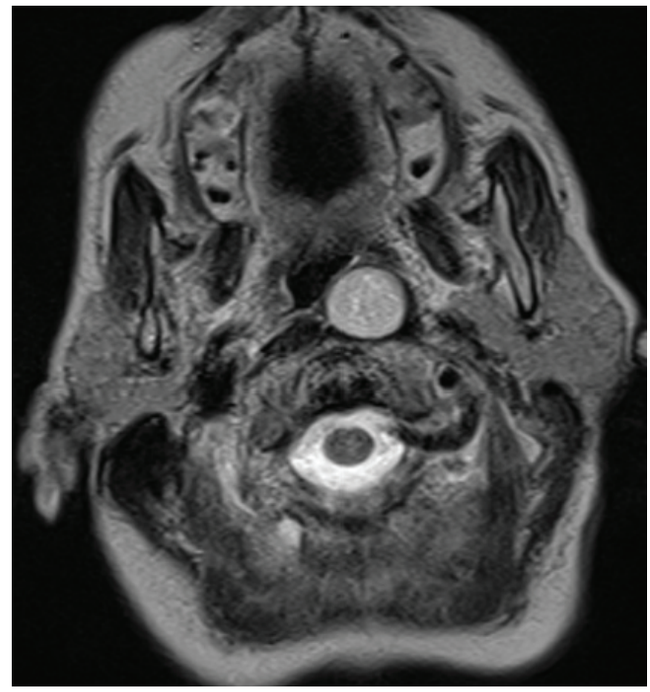

Figure 2. With an axial T2 weighted sequence, the lesion observed within the retropharyngeal area is identified as of hyperintense nature, similar to the one observed with the axial T1 weighted sequence.

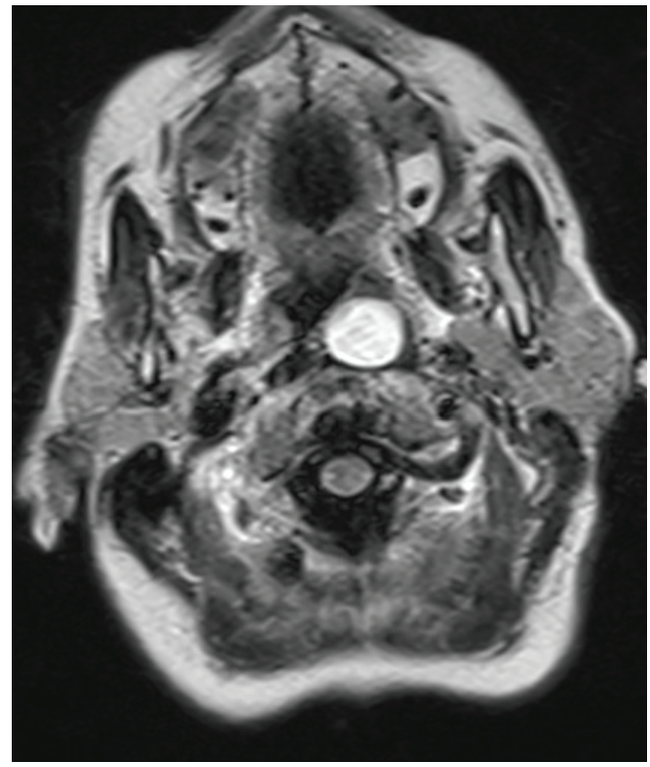

Figure 3. With axial FLAIR imaging, the lesion is also observed to have hyperintense signalling feature, similar to those observed with T1 and T2 weighted sequences.

Discussion

Lipomas are described as benign mesenchymal tumoural formations that are made up of mature lipid cells. While most lipomas located in the head- neck region are observed within the posterior area, those localized within the retropharyngeal space are even rarer[3]. Since lipomas grow very slowly, most of them are diagnosed when they reach really big sizes. Retropharyngeal lipomas rarely cause obstructive sleep apnea syndrome. Only 6 cases have been reported so far, with retropharyngeal lipomas causing sleep apnea syndrome, in relevant literature [4].

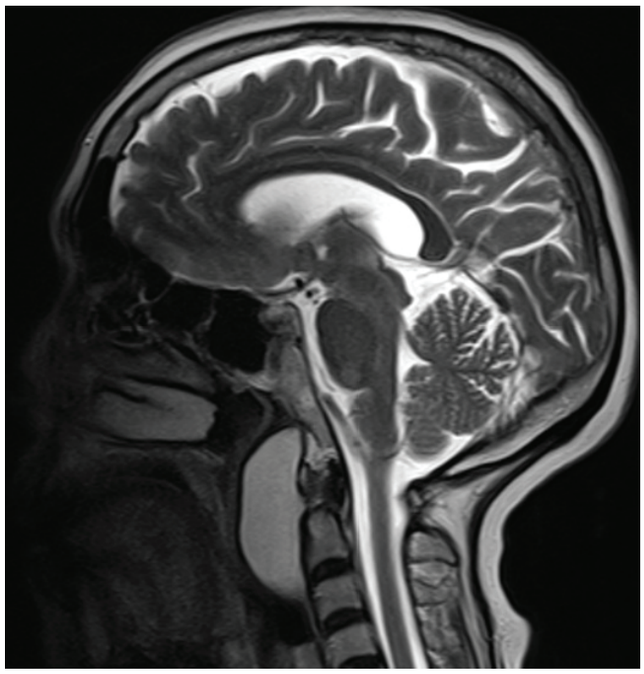

Figure 4. With sagittal T2- weighted sequence, it is seen that the lesion extended from the skull base level to C3- vertebrae level.

Depending on their sizes, retropharyngeal lipomas might cause the emergence of symptoms secondary to airway obstruction with alternating clinical severity, such as dysphagia, snoring, dyspnea and obstructive sleep apnea syndrome [5].

Lipomas need to be differentiated from liposarcomas. During an assessment via CT, lipomas are observed as mass lesions with homogenous interior structure that lack contrast, with values ranged between -50 and -150 Hounsfield units, those with increased linear density, presence of nodularity and components with contrasting material should indicate liposarcomas [6].

Due to its high contrast resolution and multiplanary feature, MRI technique could successfully reflect the interior structure of the lesion as well as its state of being spread to the surrounding tissues, along with the advantage of not containing ionized radiation, that might be regarded as factors causing its superiority over CT imaging.

With this report, we have aimed to discuss the clinical course of a 22-year old male patient with symptoms and MRI scans that yielded to a diagnosis of lipoma localized within the retropharyngeal space, along with a review of data from the relevant literature. Upon analysing this literature, we have realized that many cases had not been diagnosed due to insufficient clinical examination, similar to what our case had experienced. While careful clinical examination of patients with symptoms of dysphagia, snoring, excessive fatigue and drowsiness, along with symptoms of obstructive sleep apnea constitute the most significant step of the diagnostic process, the formal diagnosis could easily be made via CT-MRI techniques, ruling out the need for a histopathological evaluation.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

References

1. Hadad FS, Hadad FF, Zaytoun G. Retropharyngeal lipoma a benign yet potentially lethal condition. Case presentation and review of literature. Neurosurgery. 2005; 15: 145-54.
2. Gong W, Wang E, Zhang B, Da J. A retropharyngeal lipoma causing obstructive sleep apnea in a child. J Clin Sleep Med. 2006; 15: 328-9.
3. Kim KS, Yang HS. Unusual locations of lipoma: differential diagnosis of head and neck mass. Aust. Fam. Physician. 2014; 43: 867–70.
4. Aydin U, Karakoc O, Binar M, Arslan F, Gerek M. Intraoral excision of a huge retropharyngeal lipoma causing dysphagia and obstructive sleep apnea. Braz. J. Otorhinolaryngol. 2016. Doi: 10.1016/j.bjorl.2016.10.011
5. Casale M, Salvinelli F, Mallio CA, Frari V, Vincenzi B, Bressi F, et al. Upper airway study should always come before any sleep study in OSAS evaluation: a giant parapharyngeal lipoma behind OSAS. Eur Rev Med Pharmacol Sci. 2012; 16: 106-9.
6. Ferini-Strambi L, Fantini ML, Castronovo C. Epidemiology of obstructive sleep apnea syndrome. Minerva med. 2004; 95: 187–202.

How to cite this article:
Birkan Z, Kaymaz E. Mr findings of retropharyngeal lipoma causing obstructive sleep apnea syndrome. J Clin Anal Med 2019;10(1): 125-7.